



National Aeronautics and  
Space Administration  
**Lyndon B. Johnson Space Center**  
Houston, Texas



## Station assembly

Work is progressing on nodes and modules that will be part of the space station. Story on Page 3.



## NEAR liftoff

The first Discovery mission lifted off last Friday on its three-year mission. Photo on Page 4.

# Space News Roundup

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**RODEO DAYS**—The first JSC trial ride brings out several horse-riding employees lead by a traditional covered wagon, above. Right: Rodeo Clown Mike McBride gives Sean Fitzpatrick, son of Bonnie Fitzpatrick of Pioneer a traditional rodeo clown face. Last Friday's 'Go Western' days featured face artist Sean Collins painting children's faces and Leslie Maxwell bringing small animals for children to handle at the JSC Child Care Center. Bldg. 3 Cafeteria rodeo events included cutting horse techniques; saddle and roping demonstrations; line dancing instruction and a best western outfit contest. First-place female winner was Teena Still of Kelsey-Sebold; First-place male was Frank Newman of Flight Crew Operations. Capping off events was the Rodeo Lift-off Party featuring the Original River Road Boys providing country and western music.

JSC photos by Karen Schmidt and Fran Brockington



## Columbia crew reels out tether this Saturday

By James Hartsfield

Even the weather forecast was perfect as the countdown for *Columbia's* launch on STS-75 ticked down smoothly Wednesday toward a 2:18 p.m. CST Thursday launch.

As of mid-week, Air Force weather forecasters predicted a rare 100 percent probability of acceptable weather for an on-time liftoff of STS-75, which carries the reflight of the Tethered Satellite System and the third of the United States Microgravity Payload. *Columbia's* crew—Commander Andy Allen; Pilot Scott Horowitz; Mission Specialists Jeff Hoffman, Maurizio Cheli, Claude Nicollier and Franklin Chang-Diaz; and Payload Specialist Umberto Guidoni from the Italian Space Agency—traveled to KSC Monday.

For the 14-day mission, the first five of which will be devoted to TSS-1R operations and the last nine devoted to USMP-3 work, the crew will be on duty 24 hours a day, split into three teams. Allen and Hoffman comprise the White Team; Nicollier and Chang-Diaz are the Blue Team; and Horowitz, Cheli and Guidoni are designated the Red Team.

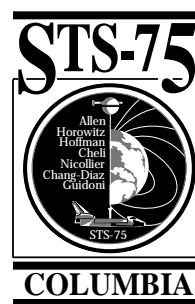
The TSS-1R will explore the dynamics and potential of using tethers in orbit. The satellite is to be deployed from *Columbia* to a distance of almost 13 miles, yet still attached to the cargo bay by a tether.

As *Columbia* and the satellite orbit, experiments will focus on using the tether as an electricity generator, predicted to produce as much as one kilowatt of power. The environment around *Columbia* and the satellite also will be a subject of study during the almost two days the satellite is deployed before the tether is rewound back into the cargo bay.

Following the TSS-1R operations, USMP-3 will take center stage, performing nine days of studies involving the use of weightlessness to create new crystals and materials that are hoped to revolutionize the construction of semiconductors and computer chips. Highlights of the flight, given an on-time launch Thursday, include: deploy of TSS-1R from *Columbia* at about 2:37 p.m. CST Saturday;

retrieval at about 12:45 p.m. Monday; a crew press conference at 6:03 a.m. March 5; and a KSC landing at 6:32 a.m. on March 7.

In addition to TSS-1R and USMP-3, *Columbia* also carries several secondary experiments, including the Middeck Glove Box which will be used for studies involving combustion in weightlessness and the Commercial Protein Crystal Growth, which will grow crystals that will be used to create new drugs for Chagas disease, among others, a dangerous Latin American, insect-borne illness.



## NASA Shuttle Web offers STS-75 crew's-eye view

The NASA Shuttle Web will offer an astronauts' perspective on orbital tracking on the STS-75 home page as it brings views of on-board laptop computer displays to the Internet.

The new feature is a regularly updated snapshot of graphics from the WORLDMAP program that astronauts use on their laptop Payload and General Support Computer. The display pinpoints the shuttle's exact location to help the astronauts with their situational awareness and to provide information for documenting their Earth

observations with cameras.

The program—developed by the Space Operations Computing (SpOC) Team—is the same that the crew is using on board. Both the flight version and the ground version access the orbiter state vector information via the shuttle's pulse code master modulation unit. The PCMMU, pronounced "puckamoo," data stream is read into another commercially available program called PCDeCOM, which extracts specified data parameters and feeds

Please see **NEW**, Page 4

## New computer virus type spreads through E-mail

JSC's computer security experts are keeping a close eye on the advent of a new type of virus that is spreading through electronic mail.

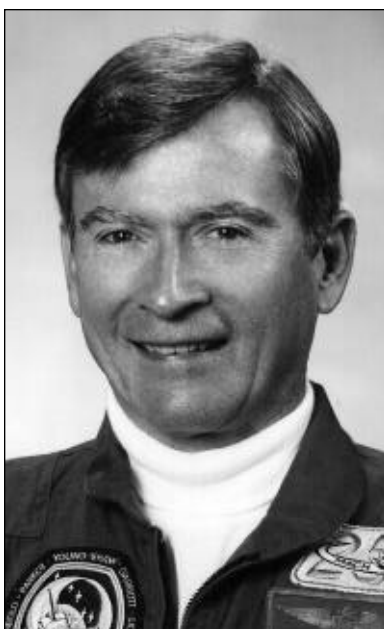
The viruses, called "macro viruses" are embedded in E-mail attachments and activated when the recipient opens the attached file.

"In the old days we talked in a more theoretical sense about viruses coming in by E-mail. It's always been technically possible, just in practice it didn't happen," said JSC Computer Security Manager Lee Snapp. "Now we're seeing the complexion of this thing change as our technology steps up and the virus writers step up to abusing the new technology," Snapp said.

At the end of 1995, a Word macro virus spread throughout the JSC community, causing headaches but little lasting damage. Although none has been detected at a NASA installation yet, newer versions carried by common Microsoft Word or Excel files can cause serious damage.

A macro is a set of commands that you give your computer simply by clicking on an icon. Macros can be embedded in documents. When you open the document, you run all the embedded programs that are there too.

"If one of those imbedded programs is to put an obscene picture Please see **COMPUTER**, Page 4



John Young

## Young becomes JSC associate director

JSC Director George Abbey has appointed veteran astronaut John Young associate director of the center, effective immediately.

Young will be responsible for technical, operational safety and oversight of all programs and activities at JSC. He will be supported by representatives from Mission Operations, Flight Crew Operations, Engineering, Space and Life Sciences and the Safety, Reliability and Quality Assurance Directorates.

Young was selected as an astronaut in September 1962. He is the first person to fly in space six times. His first flight was Gemini 3, the first manned Gemini mission, in March

1965. As commander of Gemini 10 in 1966, Young completed a dual rendezvous with two separate Agena target vehicles.

On his third flight in May 1969, Young was Apollo 10 pilot. His fourth space flight, Apollo 16 in 1972, was a lunar mission, with Young as commander. The crew collected almost 200 pounds of lunar samples and drove more than 16 miles in the lunar rover on three separate geology traverses. Young's fifth flight was as commander of STS-1, the first flight of the shuttle in April 1981, with Bob Crippen as pilot. His sixth flight as commander of STS-9, was the first Spacelab mission in 1983.